

COMMONWEALTH OF AUSTRALIA
PATENTS ACT 1952-62

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE:

Application Number: 21476-77
Lodged: 20-1-77

Class

Int. Class

B21 F009/00

Complete Specification Lodged: 20-1-77

Accepted:

Published:

Priority... 28-1-76 NZ 179849

Related Art: 25077-30 583
25257-30

PATENT OFFICE

TO BE COMPLETED BY APPLICANT

Name of Applicant:

WELBY ALBERT EDWARD WATSON

Address of Applicant:

3 Shirley Street, Rotorua, New Zealand

Actual Inventor:

WELBY ALBERT EDWARD WATSON

Address for Service:

Care of R.K. MADDERN & ASSOCIATES, 97 King William
Street, Adelaide, State of South Australia,
Commonwealth of Australia

Complete Specification for the invention entitled:

"A WIRE OR ROPE TIGHTENER"

The following statement is a full description of this invention, including the best method of performing it known to me.

This invention relates to a wire or rope tightener.

There are many applications where a wire or rope needs to be tightened but not to the degree where a considerable strain is applied to the wire or rope. Such applications

apply to tent ropes or clothes lines where the rope or wire

5. needs to be tightened or be able to be slackened at will.

The present invention aims to provide a tightening device which can be used to tighten a wire or rope which device is of a simple nature so that it is easy to use and can be manufactured at a low cost.

10. Broadly the invention consists of a wire or rope tightener comprising an elongate body, a generally U shaped portion extending at right angles to the longitudinal axis of the body, means to retain a wire or rope when wound about the legs of the U shape, and engagement means at the end of the body remote from the U shaped portion which can engage in the length of the wire or rope wound around the U shaped portion.

In the following description of a preferred embodiment of the invention reference will be made to the accompanying drawings in which:-

Figure 1 is a side elevation of the wire or rope tightener,

Figure 2 is a bottom plan view of the tightener shown in figure 1, and

Figure 3 is a side elevation similar to figure 1 but with the tightener shown in an operative position on a wire length.

In further describing the invention the body 10 is con-

veniently constructed from aluminium or other light weight material. The body 10 is elongate and the U shaped portion 11 is provided at one end thereof. The body 10 can have strengthening ribs or be slightly curved (not shown) in cross section to provide strength and resistance against transverse buckling.

10. The U shape portion 11 is formed integrally with the body 10 and when viewing the body in side view (see figure 1) the U shaped portion 11 is inverted and extends downwardly from the line of the body. The lower ends of the legs 12 of the U shape 11 are provided with lips 13 which extend out from the outer edge of the leg 12. Immediately above the opening of the U portion a hole 14 is drilled or otherwise formed in the body.

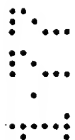
15. The engagement means 15 is also formed integrally with the body 10 and consists of two downwardly hooked legs 16 set in an opposing relationship. A gap 17, which is generally disposed to be parallel with the main length of the body (see figure 2), is provided between the hooked legs 16 so that a wire or rope W may pass into the cavity bounded by the body 10 and the two downwardly disposed legs 16. This end of the body with the hooked legs is bent at an angle to the plane of the body (see figure 2).

25. In use the U shaped portion 11 is slipped over the wire or rope W and the body 10 is then rotated in the plane of the longitudinal axis so that the wire is caused to wrap around the legs 12 of the U shape portion 11. The outwardly extending lips 13 prevent the rope or wire W from slipping off the legs 12. When the required degree of tightening is

achieved the downwardly hooked legs 16 are slipped over the rope or wire W and this prevents the body 10 from movement under the tension set up by the wire or rope. In use the winding of the wire or rope W onto the U shape portion 11

5. can be effected by grasping the body and moving in the required direction, however it is preferred that a screw driver or similar lever (not shown) be inserted in the hole 14 above the U shaped portion 11 and the rotational force applied to the screw driver or lever which thus turns the device in the required direction. The present invention

10. provides an extremely simple but effective means for tightening a wire or rope which is strung between two fixtures. The device is extremely simple to manufacture as it is of unit construction and is simple to use in operation.



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A wire or rope tightener comprising an elongate body, a generally U shaped portion extending at right angles to the longitudinal axis of the body, means to retain a wire or rope when wound about the legs of the U shape, and engagement means at the end of the body remote from the U shaped portion which can engage in the length of the wire or rope wound around the U shaped portion.
2. A tightener as claimed in claim 1 wherein the engagement means is disposed at an angle to the U shape portion.
3. A tightener as claimed in claim 2 wherein the body is of substantially V shape in plan with the U shape portion at one end thereof and the engagement means at the other end.
4. A tightener as claimed in claim 1, 2 or 3 wherein the engagement means is a cavity formed by two opposed hooked legs extending from the body with an opening leading into the cavity being provided by the spaced apart ends of the said hooked legs.
5. A tightener as claimed in claim 4 wherein the opening into the cavity is generally disposed to be parallel to the main length of the body.
6. A tightener as claimed in any one of the preceding claims wherein an opening is formed in the body adjacent the U shape portion.
7. A tightener as claimed in any one of the preceding claims wherein the means to retain a wire or rope is a lip outwardly extending from the lower end of each leg of the said U shape portion.

8. A tightener as claimed in claim 7 wherein the body, U shape portion and engagement means are a one piece construction of aluminium material.

9. A tightener as claimed in claim 8 wherein the body is slightly curved in cross section or has at least one strengthening rib formed therein.

10. A wire or rope tightener substantially as herein described with reference to and as illustrated by the accompanying drawings.

Dated this 19th day of January, 1977.

WELBY ALBERT EDWARD WATSON,

By his Patent Attorneys,
R.K. MADDERN & ASSOCIATES

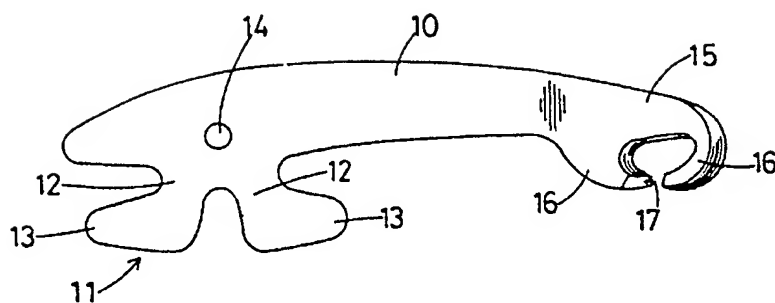


FIG. 1.

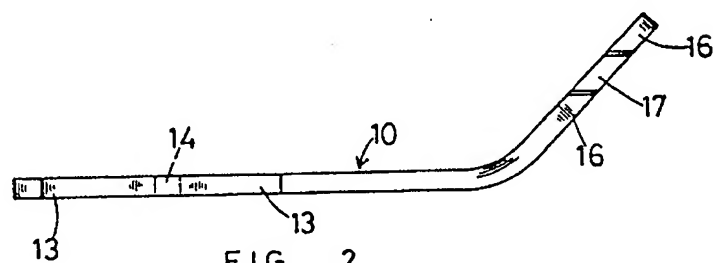


FIG. 2.

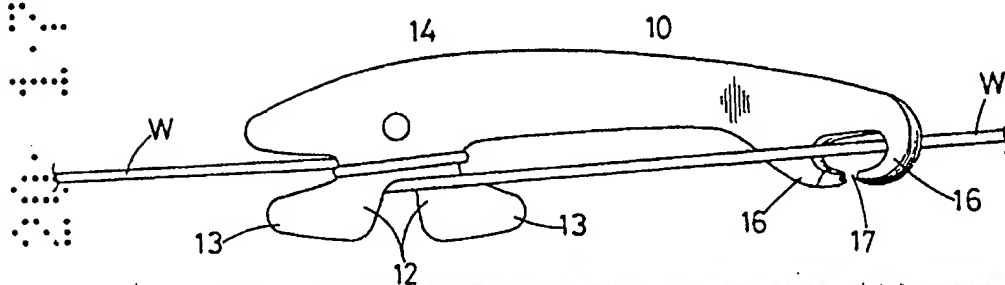


FIG. 3.